

Notice of Allowability

Application No.

10/777,970

Applicant(s)

INOUE, EIJI

Examiner

Art Unit

Dirk Wright

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1 and 2.
3. ☒ The drawings filed on 19 April 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>04192004</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

Claims Allowed

Claims 1 and 2 are allowable over the prior art of record. The prior art does not anticipate nor render obvious the combination as claimed: a continuously variable transmission apparatus having an input shaft, an output shaft, a toroidal-type continuously variable transmission unit, a gear-type differential unit in combination with a plurality of gears, and a control unit for controlling a change in transmission ratio of the toroidal-type continuously variable transmission unit wherein the toroidal-type continuously variable transmission has an input side disk rotatably driven by the input shaft, an output side disk supported coaxially with the input side disk and rotatably to the input side disk, a plurality of power rollers interposed between the input side disk and the output side disk, an input side rotation sensor for measuring a rotational speed of the input side disk, and an output side rotation sensor for measuring a rotational speed of the output side disk, wherein the differential unit has; a first input portion rotated together with the input side disk by the input shaft, and a second input portion connected to the output side disk, whereby a rotation according to a difference in speed between the first and second input portions is taken to be transmitted to the output shaft, and wherein the control unit regulates the transmission ratio of the toroidal-type continuously variable transmission unit so as to change relative speeds of the plurality of gears constituting the differential unit to thereby convert the rotational state of the output shaft to forward and backward rotations with a stationary state being interposed therebetween, with the input shaft being kept rotating in one direction, and to calculate a rotational speed of the output shaft based on a rotational speed of the input side disk obtained by the input side rotation sensor and a rotational speed of the output side disk obtained by the output side rotation sensor, and a gear ratio of the differential unit.

No particular single feature of the claim renders the claim as a whole patentable. Only the claim taken as a whole combination is deemed new and unobvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art Discussed

The examiner has considered the reference cited by applicant in his Information Disclosure Statement file April 19, 2004. The reference does not show all of the features of the claimed invention.

The references cited by the examiner are deemed pertinent to applicant's disclosure. Joe '709 shows a toroidal CVT with a planetary differential wherein a control system includes speed sensors for the input and output of the CVT, but does not show calculating an output shaft speed for the transmission by using the input side and output side CVT speeds plus the transmission ratio. Likewise, Sakai '722 A1 shows a toroidal CVT with a planetary transmission and a controller that senses the input and output speeds of the CVT but does not appear to calculate the output speed of the entire transmission by utilizing the input side and output side CVT speeds as well as the gear ratio of the transmission.

Conclusion

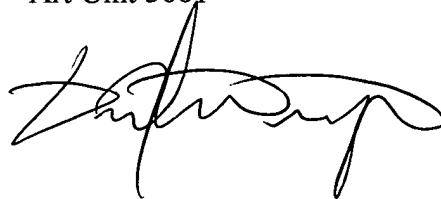
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dirk Wright whose telephone number is 571-272-7098. The examiner can normally be reached on Monday through Friday, 8AM-4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dirk Wright
Primary Examiner
Art Unit 3681

A handwritten signature in black ink, appearing to read 'Dirk Wright', is written over the printed name and title.

DW
Monday, May 09, 2005